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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	SEP 01	New pricing for the Save Answers for SciFinder Wizard within STN Express with Discover!
NEWS	4	OCT 28	KOREAPAT now available on STN
NEWS	5	NOV 30	PHAR reloaded with additional data
NEWS	6	DEC 01	LISA now available on STN
NEWS	7	DEC 09	12 databases to be removed from STN on December 31, 2004
NEWS	8	DEC 15	MEDLINE update schedule for December 2004
NEWS	9	DEC 17	ELCOM reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	10	DEC 17	COMPUAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	11	DEC 17	SOLIDSTATE reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	12	DEC 17	CERAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	13	DEC 17	THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS	14	DEC 30	EPFULL: New patent full text database to be available on STN
NEWS	15	DEC 30	CAPLUS - PATENT COVERAGE EXPANDED
NEWS	16	JAN 03	No connect-hour charges in EPFULL during January and February 2005
NEWS	17	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	18	FEB 10	STN Patent Forums to be held in March 2005
NEWS	19	FEB 16	STN User Update to be held in conjunction with the 229th ACS National Meeting on March 13, 2005

NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
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NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

```
FILE 'HOME' ENTERED AT 14:22:49 ON 25 FEB 2005

=> file reg
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 14:23:10 ON 25 FEB 2005
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STRUCTURE FILE UPDATES:   23 FEB 2005  HIGHEST RN 836595-43-8
DICTIONARY FILE UPDATES:  23 FEB 2005  HIGHEST RN 836595-43-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> s tagatose/cn
L1             1 TAGATOSE/CN

=> file caplus
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       5.03       5.24

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FILE COVERS 1907 - 25 Feb 2005  VOL 142 ISS 10
FILE LAST UPDATED: 24 Feb 2005  (20050224/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s L1
L2           196 L1
```

```
=> isomerase AND L2
ISOMERASE IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s isomerase AND L2
          16648 ISOMERASE
           1463 ISOMERASES
          16940 ISOMERASE
                  (ISOMERASE OR ISOMERASES)
L3            3 ISOMERASE AND L2

=> d all

L3   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2005 ACS on STN
AN   2003:77539  CAPLUS
DN   138:90013
ED   Entered STN:  31 Jan 2003
TI   Process for manufacturing of tagatose from lactose via enzymic hydrolysis
     and isomerization reactions
IN   Bertelsen, Hans; Eriknauer, Kristian; Bottcher, Karen; Christensen, Hans
     Jorgen Singel; Stougaard, Peter; Hansen, Ole Cai; Jorgensen, Flemming
PA   Den.
SO   U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. Ser. No. 905,108,
     abandoned.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K031-70
     ICS  C12P019-02; C07H001-00
NCL  514023000; 435105000; 536001110
CC   33-2 (Carbohydrates)
     Section cross-reference(s): 7, 9
FAN.CNT 3
     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
PI   US 2003022844         A1    20030130    US 2002-194295           20020715
     US 2003129710         A1    20030710    US 2002-193896           20020715
PRAI DK 2001-1114          A     20010716
     US 2001-305155P       P     20010716
     US 2001-905108        B2    20010716
     US 2001-386209P       P     20010716
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
 --------------   -----  ----------------------------------------------
 US 2003022844    ICM    A61K031-70
                  ICS    C12P019-02; C07H001-00
                  NCL    514023000; 435105000; 536001110
 US 2003022844    ECLA   C12N009/24; C12N009/90; C12P019/02
 US 2003129710    ECLA   C12N009/24; C12N009/90; C12P019/02
OS   CASREACT 138:90013
AB   Tagatose is manufactured by hydrolyzing lactose to galactose and glucose and
     isomerizing galactose to tagatose and chromatog. separation and recycling any
     unconverted compds.  Thereby high yields of pure tagatose are obtained.
ST   tagatose prepn lactose enzymic hydrolysis isomerization
IT   Hydrolysis
        (biol.; process for manufacturing of tagatose from lactose via enzymic
        hydrolysis and isomerization reactions)
IT   Isomerization
        (process for manufacturing of tagatose from lactose via enzymic hydrolysis
        and isomerization reactions)
IT   9031-11-2, Lactase
```

RL: CAT (Catalyst use); USES (Uses)
(S. solfataricus; process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)

IT 9023-80-7, L-Arabinose **isomerase**
RL: CAT (Catalyst use); USES (Uses)
(Thermoanaerobacter mathranii; process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)

IT 50-99-7P, D-Glucose, preparation **17598-81-1P**, Tagatose
RL: BPN (Biosynthetic preparation); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation)
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)

IT 59-23-4P, D-Galactose, preparation
RL: BPN (Biosynthetic preparation); IMF (Industrial manufacture); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)

IT 439253-48-2, Galactose **isomerase**
RL: CAT (Catalyst use); USES (Uses)
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)

IT 63-42-3, Lactose
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)

=> d

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:77539 CAPLUS
DN 138:90013
TI Process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions
IN Bertelsen, Hans; Eriknauer, Kristian; Bottcher, Karen; Christensen, Hans Jorgen Singel; Stougaard, Peter; Hansen, Ole Cai; Jorgensen, Flemming
PA Den.
SO U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. Ser. No. 905,108, abandoned.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003022844	A1	20030130	US 2002-194295	20020715
	US 2003129710	A1	20030710	US 2002-193896	20020715
PRAI	DK 2001-1114	A	20010716		
	US 2001-305155P	P	20010716		
	US 2001-905108	B2	20010716		
	US 2001-386209P	P	20010716		

OS CASREACT 138:90013

=> d 2,3 L3

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:126213 CAPLUS
DN 136:182869
TI Separation of tagatose from sugar syrup by ion exchange resins
IN Umino, Takehiro; Watanabe, Sumihide; Yamamoto, Mikio
PA Nihon Shokuhin Kako Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002051800	A2	20020219	JP 2000-240019	20000808
PRAI JP 2000-240019		20000808		

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:925357 CAPLUS
DN 136:182502
TI Development of an immobilization method of L-arabinose **isomerase** for industrial production of tagatose
AU Oh, Deok-Kun; Kim, Hye-Jung; Ryu, Se-Ah; Rho, Hoe-Jin; Kim, Pil
CS Department of Bioscience and Biotechnology, Sejong University, Seoul, 143-747, S. Korea
SO Biotechnology Letters (2001), 23(22), 1859-1862
CODEN: BILED3; ISSN: 0141-5492
PB Kluwer Academic Publishers
DT Journal
LA English
OS CASREACT 136:182502
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	11.76	17.00

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.73	-0.73

FILE 'REGISTRY' ENTERED AT 14:28:37 ON 25 FEB 2005
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DICTIONARY FILE UPDATES: 23 FEB 2005 HIGHEST RN 836595-43-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> S 9023-80-7/RN

L4 1 9023-80-7/RN

```
=> SET NOTICE 1 DISPLAY

NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND
SET COMMAND COMPLETED

=> D L4 SQIDE 1-

YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N):y
THE ESTIMATED COST FOR THIS REQUEST IS 6.15 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L4    ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2005 ACS on STN
RN    9023-80-7  REGISTRY
CN    Isomerase, L-arabinose (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN    E.C. 5.3.1.4
CN    L-Arabinose isomerase
MF    Unspecified
CI    MAN
LC    STN Files:   AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CIN,
      TOXCENTER, USPATFULL
DT.CA  CAplus document type:  Conference; Dissertation; Journal; Patent; Report
RL.P   Roles from patents:  BIOL (Biological study); OCCU (Occurrence); PREP
      (Preparation); PROC (Process); PRP (Properties); USES (Uses)
RL.NP  Roles from non-patents:  ANST (Analytical study); BIOL (Biological
      study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU
      (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); USES
      (Uses); NORL (No role in record)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
            105 REFERENCES IN FILE CA (1907 TO DATE)
            105 REFERENCES IN FILE CAPLUS (1907 TO DATE)


=> SET NOTICE LOGIN DISPLAY

NOTICE SET TO OFF  FOR DISPLAY COMMAND
SET COMMAND COMPLETED

=>

=> file caplus,agricola,biobusiness,biosis,ca,casreact,cin,toxcenter,uspatfull
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                ENTRY    SESSION
FULL ESTIMATED COST                              5.28      22.28

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                ENTRY    SESSION
CA SUBSCRIBER PRICE                              0.00      -0.73

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FILE 'CA' ENTERED AT 14:33:33 ON 25 FEB 2005
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FILE 'USPATFULL' ENTERED AT 14:33:33 ON 25 FEB 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

=> s L4
L5 317 L4

=> rem dup
DUP IS NOT VALID HERE
The DELETE command is used to remove various items stored by the system.

To delete a saved query, saved answer set, saved L-number list, SDI request, batch request, mailing list, or user-defined cluster, format, or search field, enter the name. The name may include ? for left, right, or simultaneous left and right truncation.

Examples:

```
DELETE BIO?/Q           - delete query names starting with BIO
DELETE ?DRUG/A          - delete answer set names ending with DRUG
DELETE ?ELEC?/L         - delete L-number lists containing ELEC
DELETE ANTICOAG/S       - delete SDI request
DELETE ENZYME/B         - delete batch request
DELETE .MYCLUSTER       - delete user-defined cluster
DELETE .MYFORMAT        - delete user-defined display format
DELETE .MYFIELD         - delete user-defined search field
DELETE NAMELIST MYLIST - delete mailing list
```

To delete an ordered document or an offline print, enter its number.

Examples:

```
DELETE P123001C         - delete print request
DELETE D134002C         - delete document order request
```

To delete an individual L-number or range of L-numbers, enter the L-number or L-number range. You may also enter DELETE LAST followed by a number, n, to delete the last n L-numbers. RENUMBER or NORENUMBER may also be explicitly specified to override the value of SET RENUMBER.

Examples:

```
DELETE L21              - delete a single L-number
DELETE L3-L6            - delete a range of L-numbers
DELETE LAST 4           - delete the last 4 L-numbers
DELETE L33-             - delete L33 and any higher L-number
```

```
  DELETE -L55             - delete L55 and any lower L-number
  DELETE L2-L6 RENUMBER - delete a range of L-numbers and
                          renumber remaining L-numbers
  DELETE RENUMBER         - renumber L-numbers after deletion of
                          intermediate L-numbers
```

Entire sets of saved items, SDI requests, batch requests, user-defined items, or E-numbers can be deleted.

Examples:

```
  DELETE SAVED/Q - delete all saved queries
  DELETE SAVED/A - delete all saved answer sets
  DELETE SAVED/L - delete all saved L-number lists
  DELETE SAVED   - delete all saved queries, answer sets,
                   and L-number lists
  DELETE SAVED/S - delete all SDI requests
  DELETE SAVED/B - delete all batch requests
  DELETE CLUSTER - delete all user-defined clusters
  DELETE FORMAT  - delete all user-defined display formats
  DELETE FIELD   - delete all user-defined search fields
  DELETE SELECT  - delete all E-numbers
  DELETE HISTORY - delete all L-numbers and restart the
                   session at L1
```

To delete an entire multifile SDI request, enter DELETE and the name of the request. To delete a component from the multifile SDI, enter DELETE and the name of the component.

```
=> s L4
L6          317 L4

=> duplicate remove
ENTER L# LIST OR (END):L6
DUPLICATE PREFERENCE IS 'CAPLUS, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CASREACT, CIN,
TOXCENTER, USPATFULL'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L6
L7           137 DUPLICATE REMOVE L6 (180 DUPLICATES REMOVED)

=> d 1-10 ti,so,abs,ibi L7
'IBI' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid
in at least one of the files.  Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti,so,abs

L7   ANSWER 1 OF 137  USPATFULL on STN
TI     Thermostable L-arabinose isomerase and process for preparing D-tagatose
AB     Disclosed are a novel gene coding for L-arabinose isomease derived from
       Thermotoga neapolitana 5068, a thermostable arabinose isomerase
       expressed from the said gene, a recombinant expression vector containing
       the said gene, a microorganism transformed with the said expression
       vector, a process for preparing thermostable arabinose isomerase from
       the said transformant and a process for preparing D-tagatose employing
       the said enzyme. Since the recombinant arabinose isomerase is highly
       thermostable and can produce tagatose with high yield at high
       temperature, it can be efficiently applied in pharmaceutical and food
       industries.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7   ANSWER 2 OF 137  CAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
```

TI Characterization of a thermostable L-arabinose (D-galactose) isomerase from the hyperthermophilic eubacterium Thermotoga maritima
SO Applied and Environmental Microbiology (2004), 70(3), 1397-1404
CODEN: AEMIDF; ISSN: 0099-2240
AB The araA gene encoding L-arabinose isomerase (AI) from the hyperthermophilic bacterium Thermotoga maritima was cloned and overexpressed in Escherichia coli as a fusion protein containing a C-terminal hexahistidine sequence. This gene encodes a 497-amino-acid protein with a calculated mol. weight of 56,658. The recombinant enzyme was purified to homogeneity by heat precipitation followed by Ni2+ affinity chromatog. The native enzyme was estimated by gel filtration chromatog. to be a homotetramer with a mol. mass of 232 kDa. The purified recombinant enzyme had an isoelec. point of 5.7 and exhibited maximal activity at 90° and pH 7.5 under the assay conditions used. Its apparent Km values for L-arabinose and D-galactose were 31 and 60 mM, resp.; the apparent Vmax values (at 90°) were 41.3 U/mg (L-arabinose) and 8.9 U/mg (D-galactose), and the catalytic efficiencies (kcat/Km) of the enzyme were 74.8 mM-1 · min-1 (L-arabinose) and 8.5 mM-1 · min-1 (D-galactose). Although the T. maritima AI exhibited high levels of amino acid sequence similarity (>70%) to other heat-labile mesophilic AIs, it had greater thermostability and higher catalytic efficiency than its mesophilic counterparts at elevated temps. In addition, it was more thermostable in the presence of Mn2+ and/or Co2+ than in the absence of these ions. The enzyme carried out the isomerization of D-galactose to D-tagatose with a conversion yield of 56% for 6 h at 80°.

L7 ANSWER 3 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
TI Enzymatic conversion of D-galactose to D-tagatose: heterologous expression and characterisation of a thermostable L-arabinose isomerase from Thermoanaerobacter mathranii
SO Applied Microbiology and Biotechnology (2004), 64(6), 816-822
CODEN: AMBIDG; ISSN: 0175-7598
AB The ability to convert D-galactose into D-tagatose was compared among a number of bacterial L-arabinose isomerases (araA). One of the most efficient enzymes, from the anaerobic thermophilic bacterium Thermoanaerobacter mathranii, was produced heterologously in Escherichia coli and characterized. Amino acid sequence comparisons indicated that this enzyme is only distantly related to the group of previously known araA sequences in which the sequence similarity is evident. The substrate specificity and the Michaelis-Menten consts. of the enzyme determined with L-arabinose, D-galactose and D-fucose also indicated that this enzyme is an unusual, versatile L-arabinose isomerase which is able to isomerize structurally related sugars. The enzyme was immobilized and used for production of D-tagatose at 65 show 132°show 132C. Starting from a 30% solution of D-galactose, the yield of D-tagatose was 42% and no sugars other than D-tagatose and D-galactose were detected. Direct conversion of lactose to D-tagatose in a single reactor was demonstrated using a thermostable β-galactosidase together with the thermostable L-arabinose isomerase. The two enzymes were also successfully combined with a com. available glucose isomerase for conversion of lactose into a sweetening mixture comprising lactose, glucose, galactose, fructose and tagatose.

L7 ANSWER 4 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
TI A new thermophile strain of Geobacillus thermodenitrificans having L-arabinose isomerase activity for tagatose production
SO Journal of Microbiology and Biotechnology (2004), 14(2), 312-316
CODEN: JOMBES; ISSN: 1017-7825
AB Five strains, producing bacterial thermostable L-arabinose isomerase, were isolated from Korean soil samples obtained from compost under high temperature circumstances. Among these strains, the CBG-A1 showed the highest L-arabinose isomerase activity at 60°C and was selected as a D-tagatose producing strain from D-galactose. This strain was identified as Geobacillus thermodenitrificans based on the 16S rRNA anal., and biol.

and biochem. characteristics. The isolated strain was aerobic, rod-shaped, Gram-pos., nonmotile, and an endospore-forming bacterium. No growth was detected in culture temperature below 40°C. The maximum growth temperature and maximum temperature of enzyme activity were 75°C and 65°C, resp. In metal ion effects, Ca2+ was the most effective enzyme activator with the reaction rate by 150%. In a 5-1 jar fermentor with 3-1 MY medium, L-arabinose isomerase activity was growth-associated and pH decreased rapidly after the initial logarithmic phase.

L7 ANSWER 5 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 4
TI Current studies on biological tagatose production using L-arabinose isomerase: a review and future perspective
SO Applied Microbiology and Biotechnology (2004), 65(3), 243-249
CODEN: AMBIDG; ISSN: 0175-7598
AB A review, with refs. D-Tagatose is a hexoketose monosaccharide sweetener, which is an isomer of D-galactose and is rarely found in nature. Recently, there has been industrial interest in D-tagatose as a low-calorie sugar-substituting sweetener. This article describes the properties and metabolism of tagatose as well as its com. importance. The comparison between the biol. tagatose production and the chemical production was reviewed based on the example of the glucose isomerization into fructose. The industrial problems facing its com. application is described and evolving potential solns. are suggested.

L7 ANSWER 6 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 5
TI Modified Saccharomyces cerevisiae strain that consumes L-arabinose and produces ethanol
SO PCT Int. Appl., 11 pp.
CODEN: PIXXD2
AB The present invention relates to a method for producing a L-arabinose utilizing yeast stain for the production ethanol. The yeast strain is modified by introducing and expressing araA gene (L-arabinose isomerase), araB gene (L-ribulokinase D121-N) and araD gene (L-ribulose-5-P 4-epimerase) and carrying addnl. mutations in its genome or overexpressing a TAL1 (transaldolase) gene. The modified Saccharomyces strain is able to consume L-arabinose and to produce ethanol for use as a suitable alternative to fossil fuels.

L7 ANSWER 7 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 6
TI Process for manufacturing of tagatose
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
AB Tagatose is manufactured by hydrolyzing lactose to galactose and glucose and isomerizing galactose to tagatose and chromatog. separation and recycling any unconverted compds. Thereby high yields of pure tagatose are obtained.

L7 ANSWER 8 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 7
TI Sequences of thermostable L-arabinose isomerase from Thermoanaerobacter mathranii and their use for producing tagatose
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
AB The invention provides sequences of a novel thermostable L-arabinose isomerase derived from Thermoanaerobacter mathranii. The enzyme is suitable for the production of D-tagatose, a useful low-calories sweetener. The enzyme may be obtained from a Thermoanaerobacter species.

L7 ANSWER 9 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 8
TI Process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions
SO U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. Ser. No. 905,108, abandoned.
CODEN: USXXCO
AB Tagatose is manufactured by hydrolyzing lactose to galactose and glucose and

isomerizing galactose to tagatose and chromatog. separation and recycling any unconverted compds. Thereby high yields of pure tagatose are obtained.

L7 ANSWER 10 OF 137 USPATFULL on STN
TI Biological tagatose production by recombinant Escherichia coli
AB This invention relates to a recombinant Escherichia coli and a process for producing D-tagatose. In detail, it includes the construction of recombinant E.coli harboring L-arabinose isomerase, whole-cell conversion of D-galactose into D-tagatose by recombinant E.coli expressing L-arabinose isomerase, enzymatic production of D-tagatose by the extract of recombinant E.coli expressing L-arabinose isomerase, and bioconversion by immobilized L-arabinose isomerase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 11-20 Ti, so, abs, ibib L7

L7 ANSWER 11 OF 137 USPATFULL on STN
TI Methods for identifying therapeutic targets for treating infectious disease
AB This invention provides methods and systems to identify enzymes that act as enzyme catalyzed therapeutic activators and the enzymes identified by these methods. Also provided by this invention are compounds activated by the enzymes as well as compositions containing these compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER:	2003:188386 USPATFULL		
TITLE:	Methods for identifying therapeutic targets for treating infectious disease		
INVENTOR(S):	Shepard, H. Michael, Encinitas, CA, UNITED STATES Lackey, David B., San Diego, CA, UNITED STATES Cathers, Brian E., San Diego, CA, UNITED STATES Sergeeva, Maria V., San Diego, CA, UNITED STATES		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003130179	A1	20030710
APPLICATION INFO.:	US 2001-910345	A1	20010720 (9)
	NUMBER		DATE
PRIORITY INFORMATION:	US 2000-219598P		20000720 (60)
	US 2000-244953P		20001101 (60)
	US 2001-276728P		20010316 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	Antoinette F. Konski, McCutchen, Doyle, Brown & Enersen, LLP, 18th Floor, Three Embarcadero Center, San Francisco, CA, 94111		
NUMBER OF CLAIMS:	81		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	342 Drawing Page(s)		
LINE COUNT:	4432		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 12 OF 137 USPATFULL on STN
TI Novel thermostable isomerase and use hereof, in particular for producing tagatose
AB A novel L-arabinose isomerase active enzyme and its corresponding gene, derived from a thermophilic source are provided. The enzyme is suitable for the production of D-tagatose, a useful low-calorie sweetener. The enzyme may be obtained from a Thermoanaerobacter species such as Thermoanaerobacter mathranii.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:187920 USPATFULL
TITLE: Novel thermostable isomerase and use hereof, in particular for producing tagatose
INVENTOR(S): Hansen, Ole C., Vaerlose, DENMARK
Jorgensen, Flemming, Lyngby, DENMARK
Stougaard, Peter,. Skibby, DENMARK
Bertelsen, Hans, Videbaek, DENMARK
Bottcher, Karen, Kibaek, DENMARK
Christensen, Hans Jorgen Singel, Herning, DENMARK
Eriknauer, Kristian, Odder, DENMARK

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003129710	A1	20030710	
APPLICATION INFO.:	US 2002-193896	A1	20020715	(10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-386209, filed on 16 Jul 2001, PENDING

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2001-305155P	20010716	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow,, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 2155
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 13 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
TI A modified Saccharomyces cerevisiae strain that consumes L-arabinose and produces ethanol
SO Applied and Environmental Microbiology (2003), 69(7), 4144-4150
CODEN: AEMIDF; ISSN: 0099-2240
AB Metabolic engineering is a powerful method to improve, redirect, or generate new metabolic reactions or whole pathways in microorganisms. Here we describe the engineering of a Saccharomyces cerevisiae strain able to utilize the pentose sugar L-arabinose for growth and to ferment it to ethanol. Expanding the substrate fermentation range of S. cerevisiae to include pentoses is important for the utilization of this yeast in economically feasible biomass-to-ethanol fermentation processes. After overexpression of a bacterial L-arabinose utilization pathway consisting of Bacillus subtilis AraA and Escherichia coli AraB and AraD and simultaneous overexpression of the L-arabinose-transporting yeast galactose permease, we were able to select an L-arabinose-utilizing yeast strain by sequential transfer in L-arabinose media. Mol. anal. of this strain, including DNA microarrays, revealed that the crucial prerequisite for efficient utilization of L-arabinose is a lowered activity of L-ribulokinase. Moreover, high L-arabinose uptake rates and enhanced transaldolase activities favor utilization of L-arabinose. With a doubling time of about 7.9 h in a medium with L-arabinose as the sole carbon source, an ethanol production rate of 0.06 to 0.08 g of ethanol per g (dry weight) · h-1 under oxygen-limiting conditions, and high ethanol yields, this yeast strain should be useful for efficient fermentation of hexoses and pentoses in cellulosic biomass hydrolyzates.
ACCESSION NUMBER: 2003:552388 CAPLUS
DOCUMENT NUMBER: 139:244787
TITLE: A modified Saccharomyces cerevisiae strain that consumes L-arabinose and produces ethanol

AUTHOR(S): Becker, Jessica; Boles, Eckhard
CORPORATE SOURCE: Institut fuer Mikrobiologie, Heinrich-Heine-Universitaet, Duesseldorf, D-40225, Germany
SOURCE: Applied and Environmental Microbiology (2003), 69(7), 4144-4150
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10
TI Continuous D-Tagatose Production by Immobilized Thermostable L-Arabinose Isomerase in a Packed-Bed Bioreactor
SO Biotechnology Progress (2003), 19(6), 1643-1647
CODEN: BIPRET; ISSN: 8756-7938
AB D-Tagatose was continuously produced using thermostable L-arabinose isomerase immobilized in alginate with D-galactose solution in a packed-bed bioreactor. Bead size, L/D (length/diameter) of reactor, dilution rate, total loaded enzyme amount, and substrate concentration were found to be optimal at 0.8 mm, 520/7 mm, 0.375 h-1, 5.65 units, and 300 g/L, resp. Under these conditions, the bioreactor produced about 145 g/L tagatose with an average productivity of 54 g tagatose/L·h and an average conversion yield of 48% (weight/weight). Operational stability of the immobilized enzyme was demonstrated, with a tagatose production half-life of 24 days.
ACCESSION NUMBER: 2003:519828 CAPLUS
DOCUMENT NUMBER: 139:349682
TITLE: Continuous D-Tagatose Production by Immobilized Thermostable L-Arabinose Isomerase in a Packed-Bed Bioreactor
AUTHOR(S): Ryu, Se-Ah; Kim, Chang Sup; Kim, Hye-Jung; Baek, Dae Heoun; Oh, Deok-Kun
CORPORATE SOURCE: Department of Bioscience and Biotechnology, Sejong University, Seoul, 143-747, S. Korea
SOURCE: Biotechnology Progress (2003), 19(6), 1643-1647
CODEN: BIPRET; ISSN: 8756-7938
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:349682
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 11
TI Production of tagatose by a recombinant thermostable L-arabinose isomerase from Thermus sp. IM6501
SO Biotechnology Letters (2003), 25(12), 963-967
CODEN: BILED3; ISSN: 0141-5492
AB A gene (thaI) corresponding to L-arabinose isomerase from Thermus strain IM6501 was cloned by PCR. It comprised 1488 nucleotides and encoded a polypeptide of 496 residues with a predicted mol. weight of 56019 Da. The deduced amino acid sequence had 96.8% identity with the L-arabinose isomerase of Geobacillus stearothermophilus. Recombinant ThaI with N-terminal hexa-histidine tags was over-expressed in Escherichia coli and purified by affinity chromatog. using Ni-NTA resin. The purified ThaI was thermostable with maximal activity at 60 °C at pH 8 for 30 min of reaction. Zn2+ and Ni2+ inactivated the catalytic activity of ThaI, 5 mM Mn2+ enhanced the bioconversion yield by 90%. The bioconversion yield of 54% from D-galactose to D-tagatose was obtained by recombinant ThaI at 60 °C over 3 d.
ACCESSION NUMBER: 2003:432388 CAPLUS
DOCUMENT NUMBER: 140:58480

TITLE: Production of tagatose by a recombinant thermostable L-arabinose isomerase from Thermus sp. IM6501
AUTHOR(S): Kim, Jung-Woo; Kim, Young-Wan; Roh, Hoe-Jin; Kim, Hae-Young; Cha, Jae-Ho; Park, Kwan-Hwa; Park, Cheon-Seok
CORPORATE SOURCE: Department of Food Science and Technology, Kyunghee Univ., Youngin, 449-701, S. Korea
SOURCE: Biotechnology Letters (2003), 25(12), 963-967
CODEN: BILED3; ISSN: 0141-5492
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 12
TI A feasible enzymatic process for D-tagatose production by an immobilized thermostable L-arabinose isomerase in a packed-bed bioreactor
SO Biotechnology Progress (2003), 19(2), 400-404
CODEN: BIPRET; ISSN: 8756-7938
AB To develop a feasible enzymic process for D-tagatose production, a thermostable L-arabinose isomerase, Gali152, was immobilized in alginate, and the galactose isomerization reaction conditions were optimized. The pH and temperature for the maximum galactose isomerization reaction were pH 8.0 and
65° in the immobilized enzyme system and pH 7.5 and 60° in the free enzyme system. The presence of Mn2+ enhanced galactose isomerization to tagatose in both the free and immobilized enzyme systems. The immobilized enzyme was more stable than the free enzyme at the same pH and temperature Under stable conditions of pH 8.0 and 60°, the immobilized enzyme produced 58 g/L of tagatose from 100 g/L galactose in 90 h by batch reaction, whereas the free enzyme produced 37 g/L tagatose due to its lower stability. A packed-bed bioreactor with immobilized Gali152 in alginate beads produced 50 g/L tagatose from 100 g/L galactose in 168 h, with a productivity of 13.3 (g of tagatose)/(L-reactor·h) in continuous mode. The bioreactor produced 230 g/L tagatose from 500 g/L galactose in continuous recycling mode, with a productivity of 9.6 g/L-h and a conversion yield of 46%.
ACCESSION NUMBER: 2002:982441 CAPLUS
DOCUMENT NUMBER: 138:203747
TITLE: A feasible enzymatic process for D-tagatose production by an immobilized thermostable L-arabinose isomerase in a packed-bed bioreactor
AUTHOR(S): Kim, Hye-Jung; Ryu, Se-Ah; Kim, Pil; Oh, Deok-Kun
CORPORATE SOURCE: Department of Bioscience and Biotechnology, Sejong University, Seoul, 143-747, S. Korea
SOURCE: Biotechnology Progress (2003), 19(2), 400-404
CODEN: BIPRET; ISSN: 8756-7938
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:203747
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 13
TI Properties of L-arabinose isomerase from Escherichia coli as biocatalyst for tagatose production
SO World Journal of Microbiology & Biotechnology (2003), 19(1), 47-51
CODEN: WJMBEY; ISSN: 0959-3993
AB L-Arabinose isomerase (EC 5.3.1.4) (I) mediates the isomerization of D-galactose into D-tagatose as well as the conversion of L-arabinose into L-ribulose. To investigate the properties of I as a biocatalyst for the conversion of galactose to tagatose, the enzyme from E. coli was

characterized. The substrate specificity of I for L-arabinose was 166-fold higher than that for D-galactose. The optimal pH and temperature for the galactose isomerization reaction were 8.0 and 30°, resp. I was stable for 1 h at temps. of <35° and within a pH range of 8-10. The Km for galactose was 1480 mM, which was 25-fold higher than that for arabinose. The addition of Fe2+ and Mn2+ enhanced the conversion of galactose to tagatose, whereas the addition of Cu2+, Zn2+, Hg2+, and Fe3+ ions inhibited the reaction completely. In the presence of 1 mM Fe2+, the Km for galactose was found to be 300 mM.

ACCESSION NUMBER: 2003:156788 CAPLUS
DOCUMENT NUMBER: 138:397960
TITLE: Properties of L-arabinose isomerase from Escherichia coli as biocatalyst for tagatose production
AUTHOR(S): Yoon, Sang-Hyun; Kim, Pil; Oh, Deok-Kun
CORPORATE SOURCE: R&D Center, Tongyang Confectionery Co., Seoul, 140-715, S. Korea
SOURCE: World Journal of Microbiology & Biotechnology (2003), 19(1), 47-51
CODEN: WJMBEY; ISSN: 0959-3993
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:397960
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 14
TI Cloning and characterization of thermostable L-arabinose isomerase from Thermotoga neapolitana and its use for preparing D-tagatose
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
AB The present invention relates to a novel gene coding for L-arabinose isomerase derived from Thermotoga neapolitana 5068, a thermostable arabinose isomerase expressed from the said gene, a recombinant expression vector containing the said gene, a microorganism transformed with the said expression vector, a process for preparing thermostable arabinose isomerase from the said transformant and a process for preparing D-tagatose employing the said enzyme. Since the recombinant arabinose isomerase of the invention is highly thermostable and can produce tagatose with high yield at high temperature, it can be efficiently applied in pharmaceutical and food industries.

ACCESSION NUMBER: 2002:504941 CAPLUS
DOCUMENT NUMBER: 137:59513
TITLE: Cloning and characterization of thermostable L-arabinose isomerase from Thermotoga neapolitana and its use for preparing D-tagatose
INVENTOR(S): Pyun, Yu Ryang; Kim, Byoung Chan; Lee, Han Seung; Lee, Dong Woo; Lee, Yoon Hee
PATENT ASSIGNEE(S): S. Korea
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002052021	A1	20020704	WO 2001-KR2243	20011222

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,

UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

KR 2002051835	A	20020629	KR 2001-80711	20011218
US 2004058419	A1	20040325	US 2003-600689	20030620
PRIORITY APPLN. INFO.:			KR 2000-80711 A	20001218
			KR 2000-80608 A	20001222
			WO 2001-KR2243 A1	20011222

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 19 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15

TI Methods for identifying therapeutic targets for treating infectious disease

SO PCT Int. Appl., 503 pp.
CODEN: PIXXD2

AB This invention provides methods and systems to identify enzymes that act as enzyme-catalyzed therapeutic activators and the enzymes identified by these methods. Also provided by this invention are compds. activated by the enzymes as well as compns. containing these compds.

ACCESSION NUMBER: 2002:89878 CAPLUS
DOCUMENT NUMBER: 136:156403
TITLE: Methods for identifying therapeutic targets for treating infectious disease
INVENTOR(S): Shepard, Michael H.; Lackey, David B.; Cathers, Brian E.; Sergeeva, Maria V.
PATENT ASSIGNEE(S): Newbiotics, Inc., USA
SOURCE: PCT Int. Appl., 503 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002007780	A2	20020131	WO 2001-US23095	20010720
WO 2002007780	A3	20030220		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003130179	A1	20030710	US 2001-910345	20010720
PRIORITY APPLN. INFO.:			US 2000-219598P P	20000720
			US 2000-244953P P	20001101
			US 2001-276728P P	20010316

L7 ANSWER 20 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 16

TI Separation of tagatose from sugar syrup by ion exchange resins

SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

AB Tagatose (I), useful as a low-calorie sweetener, is separated by fractionating I-containing sugar syrup by chromatog. using ion exchange resins. Galactose solution was treated with Ca(OH)2 for 5 h and the reaction mixture was centrifuged. The supernatant was filtered through 0.45-μm membrane filter, desalted using Amberlite MB 3, and concentrated to give syrup containing 16.8% galactose and 83.2% I. The syrup was passed through a column packed

with Ca-form Dowex XFS 43278 at 50° and the column was eluted with H2O to give a fraction containing 94.5% I.

ACCESSION NUMBER: 2002:126213 CAPLUS
DOCUMENT NUMBER: 136:182869
TITLE: Separation of tagatose from sugar syrup by ion exchange resins
INVENTOR(S): Umino, Takehiro; Watanabe, Sumihide; Yamamoto, Mikio
PATENT ASSIGNEE(S): Nihon Shokuhin Kako Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002051800	A2	20020219	JP 2000-240019	20000808
PRIORITY APPLN. INFO.:			JP 2000-240019	20000808

=> s 21-30 ti,so,abs,ibib L7
MISSING OPERATOR ,ABS,IBIB L7
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> d 21-30 ti, so, abs, ibib L7

L7 ANSWER 21 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 17
TI Cloning, expression and characterization of L-arabinose isomerase from Thermotoga neapolitana: bioconversion of D-galactose to D-tagatose using the enzyme
SO FEMS Microbiology Letters (2002), 212(1), 121-126
CODEN: FMLED7; ISSN: 0378-1097
AB Gene araA encoding an L-arabinose isomerase (AraA) from the hyperthermophile, Thermotoga neapolitana 5068 was cloned, sequenced, and expressed in Escherichia coli. The gene encoded a polypeptide of 496 residues with a calculated mol. mass of 56 677 Da. The deduced amino acid sequence has 94.8% identical amino acids compared with the residues in a putative L-arabinose isomerase of Thermotoga maritima. The recombinant enzyme expressed in E. coli was purified to homogeneity by heat treatment, ion exchange chromatog. and gel filtration. The thermophilic enzyme had a maximum activity of L-arabinose isomerization and D-galactose isomerization at 85°, and required divalent cations such as Co2+ and Mn2+ for its activity and thermostability. The apparent Km values of the enzyme for L-arabinose and D-galactose were 116 mM (vmax, 119 μmol min-1 mg-1) and 250 mM (vmax, 14.3 μmol min-1 mg-1), resp., that were determined in the presence of both 1 mM Co2+ and 1 mM Mn2+. A 68% conversion of D-galactose to D-tagatose was obtained using the recombinant enzyme at the isomerization temperature of 80°.
ACCESSION NUMBER: 2002:459008 CAPLUS
DOCUMENT NUMBER: 137:274856
TITLE: Cloning, expression and characterization of L-arabinose isomerase from Thermotoga neapolitana: bioconversion of D-galactose to D-tagatose using the enzyme
AUTHOR(S): Kim, Byoung-Chan; Lee, Yoon-Hee; Lee, Han-Seung; Lee, Dong-Woo; Choe, Eun-Ah; Pyun, Yu-Ryang
CORPORATE SOURCE: Department of Biotechnology and Bioproducts Research Center, Yonsei University, Seoul, 120-749, S. Korea
SOURCE: FEMS Microbiology Letters (2002), 212(1), 121-126
CODEN: FMLED7; ISSN: 0378-1097
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal

LANGUAGE: English
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 22 OF 137 CIN COPYRIGHT 2005 ACS on STN
TI Patents
SO Ind. Bioprocess. Alert, 12 Jul 2002 (20020712), p. 8-9. CODEN: IBANBZ.
AB WO 02/052021 patent application was granted to South Korean inventors for thermostable L-arabinose isomerase and process for preparing D-tagatose thereby. Newly discovered gene from Thermotoga neapolitana 5068 expresses a thermostable arabinose isomerase that can produce tagatose suitable for food and pharmaceutical industry use at high yield and temperature.

L7 ANSWER 23 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 18
TI Method of site-specific insertion in Zymomonas mobilis genomic DNA and its use to improve ethanol fermentation
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
AB The present invention provides a method of site-specific insertion in Zymomonas, comprising, providing a Zymomonas gene fragment, interrupting a DNA sequence the fragment, and transforming the Zymomonas through homologous recombination with the interrupted fragment. Specifically, the invention provides constructs and plasmids for insertion of genes for fermentation of arabinose and xylose to ethanol and simultaneous inactivation of
lactate dehydrogenase by gene disruption, to improve the conversion of cellulose to ethanol. Exogenous genes encoding xylose isomerase, xylulokinase, L-arabinose isomerase, L-ribulokinase, L-ribulose-5-phosphate 4-epimerase, transaldolase, transketolase, and a promoter comprise the transgenes that can be inserted in Zymomonas mobilis chromosomal DNA. The invention is demonstrated by transformation of Z. mobilis with plasmids pZB101 or pZB121 (nonreplicative) which contain a cassette (ldh::Tc) of gene ldh (lactate dehydrogenase) with a gene Tcr (tetracycline resistant) insert. Southern blot hybridization showed that the Tcr marker was integrated in the ldh gene in the chromosome and HPLC anal. showed that the integrants did not produce D-lactic acid in ethanol fermns. Another example of the invention is integration of the Pgap-araBAD operon into the gene ldh site in the Z. mobilis chromosome by transformation of Z. mobilis with plasmid pZB1862-ldhL-ara which contains an ldhL-araBAD-ldhL cassette. LdhL contains gene ldh and flanking sequences. The Z. mobilis araBAD integrants were able to use either xylose or arabinose as a sole carbon source.

ACCESSION NUMBER: 2001:816941 CAPLUS
DOCUMENT NUMBER: 135:353767
TITLE: Method of site-specific insertion in Zymomonas mobilis genomic DNA and its use to improve ethanol fermentation
INVENTOR(S): Zhang, Min; Chou, Yat-Chen
PATENT ASSIGNEE(S): Midwest Research Institute, USA
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001083784	A2	20011108	WO 2001-US11239	20010406
WO 2001083784	A3	20031002		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,

SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2304927	AA	20011102	CA 2000-2304927		20000502
AU 2001051397	A5	20011112	AU 2001-51397		20010406
JP 2003531620	T2	20031028	JP 2001-580391		20010406
EP 1366178	A2	20031203	EP 2001-924773		20010406
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR					
BR 2001010676	A	20031230	BR 2001-10676		20010406
PRIORITY APPLN. INFO.:			US 2000-562613	A	20000501
			CA 2000-2304927	A	20000502
			WO 2001-US11239	W	20010406

L7 ANSWER 24 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 19
TI Development of an immobilization method of L-arabinose isomerase for industrial production of tagatose
SO Biotechnology Letters (2001), 23(22), 1859-1862
CODEN: BILED3; ISSN: 0141-5492
AB Of the immobilization methods tested, alginate beads treated with glutaraldehyde gave the most stable and economic method for immobilizing L-arabinose isomerase for the industrial production of tagatose. L-Arabinose isomerase immobilized in a packed-bed reactor produced an average of 30 g tagatose l-1 day-1 from 100 g galactose L-1 for 8 days.

ACCESSION NUMBER:	2001:925357 CAPLUS
DOCUMENT NUMBER:	136:182502
TITLE:	Development of an immobilization method of L-arabinose isomerase for industrial production of tagatose
AUTHOR(S):	Oh, Deok-Kun; Kim, Hye-Jung; Ryu, Se-Ah; Rho, Hoe-Jin; Kim, Pil
CORPORATE SOURCE:	Department of Bioscience and Biotechnology, Sejong University, Seoul, 143-747, S. Korea
SOURCE:	Biotechnology Letters (2001), 23(22), 1859-1862 CODEN: BILED3; ISSN: 0141-5492
PUBLISHER:	Kluwer Academic Publishers
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 136:182502
REFERENCE COUNT:	11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 25 OF 137 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Isolation and characterization of a gene encoding a protein disulfide isomerase from Bombyx mori Bm5 cell line.
SO Korean Journal of Genetics, (September, 2001) Vol. 23, No. 3, pp. 295-305. print.
CODEN: KJGEDG. ISSN: 0254-5934.
AB Many secreted proteins have disulfide bonds that are important for their structure and function. Protein disulfide isomerase (PDI, EC 5.3.1.4.), an enzyme that catalyzes the formation and rearrangement of thiol/disulfide exchange reactions, is a resident of the endoplasmic reticulum (ER). The subcellular localization and its function as catalyst of disulfide bond formation in the biosynthesis of secretory and cell membrane proteins suggest that PDI plays a key role in the secretory pathway. To obtain genes related to molecular chaperone and the ER foldase from the Bombyx mori Bm5 cell line, the cDNA library was constructed with mRNA isolated from Bm5 cell line treated with by tunicamycin (5 mug/ml). We have isolated a cDNA encoding protein disulfide isomerase (bPDI), which consists of an open reading frame of 484 amino acids (55.6 kDa). It shows PDI-typical two active thioredoxin sites

of CGHC and on ER retention signal of KDEL motif at its C-terminal. The bPDI protein shared less than 55% of the amino acid sequence homology with other reported PDIs. bPDI is most genetically similar to the D. melanogaster PDI.

ACCESSION NUMBER: 2001:526200 BIOSIS
DOCUMENT NUMBER: PREV200100526200
TITLE: Isolation and characterization of a gene encoding a protein disulfide isomerase from Bombyx mori Bm5 cell line.
AUTHOR(S): Goo, Tae Won; Yun, Eun Young; Hwang, Jae Sam; Kang, Seok Woo; Park, Soo Jung; You, Kwan Hee; Kwon, O-Yu [Reprint author]
CORPORATE SOURCE: Department of Anatomy, College of Medicine, Chungnam National University, Taejon, 301-131, South Korea
oykwon@hanbat.chungnam.ac.kr
SOURCE: Korean Journal of Genetics, (September, 2001) Vol. 23, No. 3, pp. 295-305. print.
CODEN: KJGEDG. ISSN: 0254-5934.
DOCUMENT TYPE: Article
LANGUAGE: Korean
ENTRY DATE: Entered STN: 14 Nov 2001
Last Updated on STN: 23 Feb 2002

L7 ANSWER 26 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 20
TI High Production of D-Tagatose, a Potential Sugar Substitute, Using Immobilized L-Arabinose Isomerase
SO Biotechnology Progress (2001), 17(1), 208-210
CODEN: BIPRET; ISSN: 8756-7938
AB An L-arabinose isomerase of Escherichia coli was immobilized using covalent binding to agarose to produce D-tagatose, a bulking sweetener that can be economically used as a sugar substitute. The immobilized L-arabinose isomerase stably produced an average of 7.5 g-tagatose/L·day for 7 days with a productivity exceeding that of the free enzyme (0.47 vs 0.30 mg/U·day). Using a scaled-up immobilized enzyme system, 99.9 g-tagatose/L was produced from galactose with 20% equilibrium in 48 h. The process was repeated two more times with production of
104.1 and 103.5 g-tagatose/L. D-Tagatose production using an immobilized L-arabinose isomerase has a high potential for com. application.

ACCESSION NUMBER: 2001:28258 CAPLUS
DOCUMENT NUMBER: 134:221488
TITLE: High Production of D-Tagatose, a Potential Sugar Substitute, Using Immobilized L-Arabinose Isomerase
AUTHOR(S): Kim, Pil; Yoon, Sang-Hyun; Roh, Hoe-Jin; Choi, Jin-Hwan
CORPORATE SOURCE: R&D Center, Tong Yang Confectionery Co., Seoul, 140-715, S. Korea
SOURCE: Biotechnology Progress (2001), 17(1), 208-210
CODEN: BIPRET; ISSN: 8756-7938
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 27 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 21
TI Expression of E. coli araBAD operon encoding enzymes for metabolizing L-arabinose in Saccharomyces cerevisiae
SO Enzyme and Microbial Technology (2001), 28(1), 16-24
CODEN: EMTED2; ISSN: 0141-0229
AB The Escherichia coli araBAD operon consists of three genes encoding three enzymes that convert L-arabinose to D-xylulose-5 phosphate. In this paper we report that the genes of the E. coli araBAD operon have been expressed in Saccharomyces cerevisiae using strong promoters from genes encoding S. cerevisiae glycolytic enzymes (pyruvate kinase, phosphoglucose isomerase,

and phosphoglycerol kinase). The expression of these cloned genes in yeast was demonstrated by the presence of the active enzymes encoded by these cloned genes and by the presence of the corresponding mRNAs in the new host. The level of expression of L-ribulokinase (araB) and L-ribulose-5-phosphate 4-epimerase (araD) in S. cerevisiae was relatively high, with greater than 70% of the activity of the enzymes in wild type E. coli. On the other hand, the expression of L-arabinose isomerase (araA) reached only 10% of the activity of the same enzyme in wild type E. coli. Nevertheless, S. cerevisiae, bearing the cloned L-arabinose isomerase gene, converted L-arabinose to detectable levels of L-ribulose during fermentation However, S. cerevisiae bearing all three genes (araA, araB, and araD) was not able to produce detectable amount of ethanol from L-arabinose. We speculate that factors such as pH, temperature, and competitive inhibition could reduce the activity of these enzymes to a lower level during fermentation compared to their activity measured in vitro. Thus, the ethanol produced from L-arabinose by recombinant yeast containing the expressed BAD genes is most likely totally consumed by the cell to maintain viability.

ACCESSION NUMBER: 2000:875305 CAPLUS
DOCUMENT NUMBER: 135:163120
TITLE: Expression of E. coli araBAD operon encoding enzymes for metabolizing L-arabinose in Saccharomyces cerevisiae
AUTHOR(S): Sedlak, M.; Ho, N. W. Y.
CORPORATE SOURCE: Laboratory of Renewable Resources Engineering, Purdue University, West Lafayette, IN, USA
SOURCE: Enzyme and Microbial Technology (2001), 28(1), 16-24
CODEN: EMTED2; ISSN: 0141-0229
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 28 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 22
TI Tagatose production with araA-expressing recombinant Escherichia coli or with immobilized L-arabinose isomerase
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
AB This invention relates to a recombinant Escherichia coli and a process for producing D-tagatose. In detail, it includes the construction of recombinant E.coli harboring L-arabinose isomerase, whole-cell conversion of D-galactose into D-tagatose by recombinant E.coli expressing L-arabinose isomerase, enzymic production of D-tagatose by the extract of recombinant E.coli expressing L-arabinose isomerase, and bioconversion by immobilized L-arabinose isomerase. Thus, recombinant E. coli expressing the E. coli araA gene produced D-tagatose from D-galactose in 9.0-11.0% yields. Using an alginate-immobilized enzyme extract of this recombinant E. coli 11-14 g/L of D-tagatose was produced from 10% D-galactose after 24 h.

ACCESSION NUMBER: 2000:814637 CAPLUS
DOCUMENT NUMBER: 133:349228
TITLE: Tagatose production with araA-expressing recombinant Escherichia coli or with immobilized L-arabinose isomerase
INVENTOR(S): Kim, Pil; Roh, Hoe-jin; Yoon, Sang-hyun; Choi, Jin-hwan
PATENT ASSIGNEE(S): Tongyang Confectionery Co., S. Korea
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:77539 CAPLUS
DN 138:90013
ED Entered STN: 31 Jan 2003
TI Process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions
IN Bertelsen, Hans; Eriknauer, Kristian; Bottcher, Karen; Christensen, Hans Jorgen Singel; Stougaard, Peter; Hansen, Ole Cai; Jorgensen, Flemming
PA Den.
SO U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. Ser. No. 905,108, abandoned.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-70
ICS C12P019-02; C07H001-00
NCL 514023000; 435105000; 536001110
CC 33-2 (Carbohydrates)
Section cross-reference(s): 7, 9
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003022844	A1	20030130	US 2002-194295	20020715
	US 2003129710	A1	20030710	US 2002-193896	20020715
PRAI	DK 2001-1114	A	20010716		
	US 2001-305155P	P	20010716		
	US 2001-905108	B2	20010716		
	US 2001-386209P	P	20010716		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003022844	ICM	A61K031-70
	ICS	C12P019-02; C07H001-00
	NCL	514023000; 435105000; 536001110
US 2003022844	ECLA	C12N009/24; C12N009/90; C12P019/02
US 2003129710	ECLA	C12N009/24; C12N009/90; C12P019/02

OS CASREACT 138:90013
AB Tagatose is manufactured by hydrolyzing lactose to galactose and glucose and isomerizing galactose to tagatose and chromatog. separation and recycling any unconverted compds. Thereby high yields of pure tagatose are obtained.
ST tagatose prepn lactose enzymic hydrolysis isomerization
IT Hydrolysis
(biol.; process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)
IT Isomerization
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)
IT 9031-11-2, Lactase
RL: CAT (Catalyst use); USES (Uses)
(S. solfataricus; process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)
IT 9023-80-7, L-Arabinose **isomerase**
RL: CAT (Catalyst use); USES (Uses)
(Thermoanaerobacter mathranii; process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)
IT 50-99-7P, D-Glucose, preparation **17598-81-1P**, Tagatose
RL: BPN (Biosynthetic preparation); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation)
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)
IT 59-23-4P, D-Galactose, preparation
RL: BPN (Biosynthetic preparation); IMF (Industrial manufacture); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)
IT 439253-48-2, Galactose **isomerase**
RL: CAT (Catalyst use); USES (Uses)
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)
IT 63-42-3, Lactose
RL: RCT (Reactant); RACT (Reactant or reagent)
(process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions)

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L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:77539 CAPLUS
DN 138:90013
TI Process for manufacturing of tagatose from lactose via enzymic hydrolysis and isomerization reactions
IN Bertelsen, Hans; Eriknauer, Kristian; Bottcher, Karen; Christensen, Hans Jorgen Singel; Stougaard, Peter; Hansen, Ole Cai; Jorgensen, Flemming
PA Den.
SO U.S. Pat. Appl. Publ., 9 pp., Cont.-in-part of U.S. Ser. No. 905,108, abandoned.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003022844	A1	20030130	US 2002-194295	20020715
	US 2003129710	A1	20030710	US 2002-193896	20020715
PRAI	DK 2001-1114	A	20010716		
	US 2001-305155P	P	20010716		
	US 2001-905108	B2	20010716		
	US 2001-386209P	P	20010716		

OS CASREACT 138:90013

=> d 2,3 L3

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:126213 CAPLUS
DN 136:182869
TI Separation of tagatose from sugar syrup by ion exchange resins
IN Umino, Takehiro; Watanabe, Sumihide; Yamamoto, Mikio
PA Nihon Shokuhin Kako Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002051800	A2	20020219	JP 2000-240019	20000808
PRAI	JP 2000-240019		20000808		

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:925357 CAPLUS
DN 136:182502
TI Development of an immobilization method of L-arabinose **isomerase** for industrial production of tagatose
AU Oh, Deok-Kun; Kim, Hye-Jung; Ryu, Se-Ah; Rho, Hoe-Jin; Kim, Pil
CS Department of Bioscience and Biotechnology, Sejong University, Seoul,

143-747, S. Korea
SO Biotechnology Letters (2001), 23(22), 1859-1862
CODEN: BILED3; ISSN: 0141-5492
PB Kluwer Academic Publishers
DT Journal
LA English
OS CASREACT 136:182502
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 11 OF 137 USPATFULL on STN

TI Methods for identifying therapeutic targets for treating infectious disease

AB This invention provides methods and systems to identify enzymes that act as enzyme catalyzed therapeutic activators and the enzymes identified by these methods. Also provided by this invention are compounds activated by the enzymes as well as compositions containing these compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:188386 USPATFULL
TITLE: Methods for identifying therapeutic targets for treating infectious disease
INVENTOR(S): Shepard, H. Michael, Encinitas, CA, UNITED STATES
Lackey, David B., San Diego, CA, UNITED STATES
Cathers, Brian E., San Diego, CA, UNITED STATES
Sergeeva, Maria V., San Diego, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003130179	A1	20030710
APPLICATION INFO.:	US 2001-910345	A1	20010720 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-219598P	20000720 (60)
	US 2000-244953P	20001101 (60)
	US 2001-276728P	20010316 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Antoinette F. Konski, McCutchen, Doyle, Brown & Enersen, LLP, 18th Floor, Three Embarcadero Center, San Francisco, CA, 94111
NUMBER OF CLAIMS: 81
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 342 Drawing Page(s)
LINE COUNT: 4432
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 12 OF 137 USPATFULL on STN

TI Novel thermostable isomerase and use hereof, in particular for producing tagatose

AB A novel L-arabinose isomerase active enzyme and its corresponding gene, derived from a thermophilic source are provided. The enzyme is suitable for the production of D-tagatose, a useful low-calorie sweetener. The enzyme may be obtained from a Thermoanaerobacter species such as Thermoanaerobacter mathranii.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:187920 USPATFULL
TITLE: Novel thermostable isomerase and use hereof, in particular for producing tagatose
INVENTOR(S): Hansen, Ole C., Vaerlose, DENMARK
Jorgensen, Flemming, Lyngby, DENMARK
Stougaard, Peter, Skibby, DENMARK
Bertelsen, Hans, Videbaek, DENMARK
Bottcher, Karen, Kibaek, DENMARK
Christensen, Hans Jorgen Singel, Herning, DENMARK
Eriknauer, Kristian, Odder, DENMARK

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003129710	A1	20030710
APPLICATION INFO.:	US 2002-193896	A1	20020715 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-386209, filed

on 16 Jul 2001, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-305155P	20010716 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow,, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 2155
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 13 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 9
TI A modified Saccharomyces cerevisiae strain that consumes L-arabinose and produces ethanol
SO Applied and Environmental Microbiology (2003), 69(7), 4144-4150
CODEN: AEMIDF; ISSN: 0099-2240
AB Metabolic engineering is a powerful method to improve, redirect, or generate new metabolic reactions or whole pathways in microorganisms. Here we describe the engineering of a Saccharomyces cerevisiae strain able to utilize the pentose sugar L-arabinose for growth and to ferment it to ethanol. Expanding the substrate fermentation range of S. cerevisiae to include pentoses is important for the utilization of this yeast in economically feasible biomass-to-ethanol fermentation processes. After overexpression of a bacterial L-arabinose utilization pathway consisting of Bacillus subtilis AraA and Escherichia coli AraB and AraD and simultaneous overexpression of the L-arabinose-transporting yeast galactose permease, we were able to select an L-arabinose-utilizing yeast strain by sequential transfer in L-arabinose media. Mol. anal. of this strain, including DNA microarrays, revealed that the crucial prerequisite for efficient utilization of L-arabinose is a lowered activity of L-ribulokinase. Moreover, high L-arabinose uptake rates and enhanced transaldolase activities favor utilization of L-arabinose. With a doubling time of about 7.9 h in a medium with L-arabinose as the sole carbon source, an ethanol production rate of 0.06 to 0.08 g of ethanol per g (dry weight) · h-1 under oxygen-limiting conditions, and high ethanol yields, this yeast strain should be useful for efficient fermentation of hexoses and pentoses in cellulosic biomass hydrolyzates.
ACCESSION NUMBER: 2003:552388 CAPLUS
DOCUMENT NUMBER: 139:244787
TITLE: A modified Saccharomyces cerevisiae strain that consumes L-arabinose and produces ethanol
AUTHOR(S): Becker, Jessica; Boles, Eckhard
CORPORATE SOURCE: Institut fuer Mikrobiologie, Heinrich-Heine-Universitaet, Duesseldorf, D-40225, Germany
SOURCE: Applied and Environmental Microbiology (2003), 69(7), 4144-4150
CODEN: AEMIDF; ISSN: 0099-2240
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 10
TI Continuous D-Tagatose Production by Immobilized Thermostable L-Arabinose Isomerase in a Packed-Bed Bioreactor
SO Biotechnology Progress (2003), 19(6), 1643-1647
CODEN: BIPRET; ISSN: 8756-7938
AB D-Tagatose was continuously produced using thermostable L-arabinose

isomerase immobilized in alginate with D-galactose solution in a packed-bed bioreactor. Bead size, L/D (length/diameter) of reactor, dilution rate, total loaded enzyme amount, and substrate concentration were found to be optimal at 0.8 mm, 520/7 mm, 0.375 h-1, 5.65 units, and 300 g/L, resp. Under these conditions, the bioreactor produced about 145 g/L tagatose with an average productivity of 54 g tagatose/L·h and an average conversion yield of 48% (weight/weight). Operational stability of the immobilized enzyme was demonstrated, with a tagatose production half-life of 24 days.

ACCESSION NUMBER: 2003:519828 CAPLUS
DOCUMENT NUMBER: 139:349682
TITLE: Continuous D-Tagatose Production by Immobilized Thermostable L-Arabinose Isomerase in a Packed-Bed Bioreactor
AUTHOR(S): Ryu, Se-Ah; Kim, Chang Sup; Kim, Hye-Jung; Baek, Dae Heoun; Oh, Deok-Kun
CORPORATE SOURCE: Department of Bioscience and Biotechnology, Sejong University, Seoul, 143-747, S. Korea
SOURCE: Biotechnology Progress (2003), 19(6), 1643-1647 CODEN: BIPRET; ISSN: 8756-7938
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:349682
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 11
TI Production of tagatose by a recombinant thermostable L-arabinose isomerase from Thermus sp. IM6501
SO Biotechnology Letters (2003), 25(12), 963-967 CODEN: BILED3; ISSN: 0141-5492
AB A gene (thaI) corresponding to L-arabinose isomerase from Thermus strain IM6501 was cloned by PCR. It comprised 1488 nucleotides and encoded a polypeptide of 496 residues with a predicted mol. weight of 56019 Da. The deduced amino acid sequence had 96.8% identity with the L-arabinose isomerase of Geobacillus stearothermophilus. Recombinant ThaI with N-terminal hexa-histidine tags was over-expressed in Escherichia coli and purified by affinity chromatog. using Ni-NTA resin. The purified ThaI was thermostable with maximal activity at 60 °C at pH 8 for 30 min of reaction. Zn2+ and Ni2+ inactivated the catalytic activity of ThaI, 5 mM Mn2+ enhanced the bioconversion yield by 90%. The bioconversion yield of 54% from D-galactose to D-tagatose was obtained by recombinant ThaI at 60 °C over 3 d.

ACCESSION NUMBER: 2003:432388 CAPLUS
DOCUMENT NUMBER: 140:58480
TITLE: Production of tagatose by a recombinant thermostable L-arabinose isomerase from Thermus sp. IM6501
AUTHOR(S): Kim, Jung-Woo; Kim, Young-Wan; Roh, Hoe-Jin; Kim, Hae-Young; Cha, Jae-Ho; Park, Kwan-Hwa; Park, Cheon-Seok
CORPORATE SOURCE: Department of Food Science and Technology, Kyunghee Univ., Youngin, 449-701, S. Korea
SOURCE: Biotechnology Letters (2003), 25(12), 963-967 CODEN: BILED3; ISSN: 0141-5492
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 16 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 12
TI A feasible enzymatic process for D-tagatose production by an immobilized thermostable L-arabinose isomerase in a packed-bed bioreactor

SO Biotechnology Progress (2003), 19(2), 400-404
CODEN: BIPRET; ISSN: 8756-7938

AB To develop a feasible enzymic process for D-tagatose production, a thermostable L-arabinose isomerase, Gali152, was immobilized in alginate, and the galactose isomerization reaction conditions were optimized. The pH and temperature for the maximum galactose isomerization reaction were pH 8.0 and 65° in the immobilized enzyme system and pH 7.5 and 60° in the free enzyme system. The presence of Mn2+ enhanced galactose isomerization to tagatose in both the free and immobilized enzyme systems. The immobilized enzyme was more stable than the free enzyme at the same pH and temperature Under stable conditions of pH 8.0 and 60°, the immobilized enzyme produced 58 g/L of tagatose from 100 g/L galactose in 90 h by batch reaction, whereas the free enzyme produced 37 g/L tagatose due to its lower stability. A packed-bed bioreactor with immobilized Gali152 in alginate beads produced 50 g/L tagatose from 100 g/L galactose in 168 h, with a productivity of 13.3 (g of tagatose)/(L-reactor·h) in continuous mode. The bioreactor produced 230 g/L tagatose from 500 g/L galactose in continuous recycling mode, with a productivity of 9.6 g/L-h and a conversion yield of 46%.

ACCESSION NUMBER: 2002:982441 CAPLUS
DOCUMENT NUMBER: 138:203747
TITLE: A feasible enzymatic process for D-tagatose production by an immobilized thermostable L-arabinose isomerase in a packed-bed bioreactor
AUTHOR(S): Kim, Hye-Jung; Ryu, Se-Ah; Kim, Pil; Oh, Deok-Kun
CORPORATE SOURCE: Department of Bioscience and Biotechnology, Sejong University, Seoul, 143-747, S. Korea
SOURCE: Biotechnology Progress (2003), 19(2), 400-404
CODEN: BIPRET; ISSN: 8756-7938
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:203747
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 13

TI Properties of L-arabinose isomerase from Escherichia coli as biocatalyst for tagatose production

SO World Journal of Microbiology & Biotechnology (2003), 19(1), 47-51
CODEN: WJMBEY; ISSN: 0959-3993

AB L-Arabinose isomerase (EC 5.3.1.4) (I) mediates the isomerization of D-galactose into D-tagatose as well as the conversion of L-arabinose into L-ribulose. To investigate the properties of I as a biocatalyst for the conversion of galactose to tagatose, the enzyme from E. coli was characterized. The substrate specificity of I for L-arabinose was 166-fold higher than that for D-galactose. The optimal pH and temperature for the galactose isomerization reaction were 8.0 and 30°, resp. I was stable for 1 h at temps. of <35° and within a pH range of 8-10. The Km for galactose was 1480 mM, which was 25-fold higher than that for arabinose. The addition of Fe2+ and Mn2+ enhanced the conversion of galactose to tagatose, whereas the addition of Cu2+, Zn2+, Hg2+, and Fe3+ ions inhibited the reaction completely. In the presence of 1 mM Fe2+, the Km for galactose was found to be 300 mM.

ACCESSION NUMBER: 2003:156788 CAPLUS
DOCUMENT NUMBER: 138:397960
TITLE: Properties of L-arabinose isomerase from Escherichia coli as biocatalyst for tagatose production
AUTHOR(S): Yoon, Sang-Hyun; Kim, Pil; Oh, Deok-Kun
CORPORATE SOURCE: R&D Center, Tongyang Confectionery Co., Seoul, 140-715, S. Korea
SOURCE: World Journal of Microbiology & Biotechnology (2003), 19(1), 47-51

CODEN: WJMBEY; ISSN: 0959-3993
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:397960
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 14
TI Cloning and characterization of thermostable L-arabinose isomerase from Thermotoga neapolitana and its use for preparing D-tagatose
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
AB The present invention relates to a novel gene coding for L-arabinose isomerase derived from Thermotoga neapolitana 5068, a thermostable arabinose isomerase expressed from the said gene, a recombinant expression vector containing the said gene, a microorganism transformed with the said expression vector, a process for preparing thermostable arabinose isomerase from the said transformant and a process for preparing D-tagatose employing the said enzyme. Since the recombinant arabinose isomerase of the invention is highly thermostable and can produce tagatose with high yield at high temperature, it can be efficiently applied in pharmaceutical and food industries.
ACCESSION NUMBER: 2002:504941 CAPLUS
DOCUMENT NUMBER: 137:59513
TITLE: Cloning and characterization of thermostable L-arabinose isomerase from Thermotoga neapolitana and its use for preparing D-tagatose
INVENTOR(S): Pyun, Yu Ryang; Kim, Byoung Chan; Lee, Han Seung; Lee, Dong Woo; Lee, Yoon Hee
PATENT ASSIGNEE(S): S. Korea
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002052021	A1	20020704	WO 2001-KR2243	20011222
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2002051835	A	20020629	KR 2001-80711	20011218
US 2004058419	A1	20040325	US 2003-600689	20030620

PRIORITY APPLN. INFO.: KR 2000-80711 A 20001218
KR 2000-80608 A 20001222
WO 2001-KR2243 A1 20011222
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 19 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 15
TI Methods for identifying therapeutic targets for treating infectious disease
SO PCT Int. Appl., 503 pp.
CODEN: PIXXD2
AB This invention provides methods and systems to identify enzymes that act

as enzyme-catalyzed therapeutic activators and the enzymes identified by these methods. Also provided by this invention are compds. activated by the enzymes as well as compns. containing these compds.

ACCESSION NUMBER: 2002:89878 CAPLUS
DOCUMENT NUMBER: 136:156403
TITLE: Methods for identifying therapeutic targets for treating infectious disease
INVENTOR(S): Shepard, Michael H.; Lackey, David B.; Cathers, Brian E.; Sergeeva, Maria V.
PATENT ASSIGNEE(S): Newbiotics, Inc., USA
SOURCE: PCT Int. Appl., 503 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002007780	A2	20020131	WO 2001-US23095	20010720
WO 2002007780	A3	20030220		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003130179	A1	20030710	US 2001-910345	20010720
PRIORITY APPLN. INFO.:			US 2000-219598P	P 20000720
			US 2000-244953P	P 20001101
			US 2001-276728P	P 20010316

L7 ANSWER 20 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 16
TI Separation of tagatose from sugar syrup by ion exchange resins
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
AB Tagatose (I), useful as a low-calorie sweetener, is separated by fractionating I-containing sugar syrup by chromatog. using ion exchange resins. Galactose solution was treated with Ca(OH)2 for 5 h and the reaction mixture was centrifuged. The supernatant was filtered through 0.45-μm membrane filter, desalted using Amberlite MB 3, and concentrated to give syrup containing 16.8% galactose and 83.2% I. The syrup was passed through a column packed with Ca-form Dowex XFS 43278 at 50° and the column was eluted with H2O to give a fraction containing 94.5% I.

ACCESSION NUMBER: 2002:126213 CAPLUS
DOCUMENT NUMBER: 136:182869
TITLE: Separation of tagatose from sugar syrup by ion exchange resins
INVENTOR(S): Umino, Takehiro; Watanabe, Sumihide; Yamamoto, Mikio
PATENT ASSIGNEE(S): Nihon Shokuhin Kako Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002051800	A2	20020219	JP 2000-240019	20000808

PRIORITY APPLN. INFO.: JP 2000-240019 20000808

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WO 2000068397	A1	20001116	WO 1999-KR661		19991104
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
KR 2000073075	A	20001205	KR 1999-16118		19990506
EP 1095153	A1	20010502	EP 1999-954465		19991104
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
US 2003235894	A1	20031225	US 2003-440407		20030519
PRIORITY APPLN. INFO.:			KR 1999-16118	A	19990506
			WO 1999-KR661	W	19991104
			US 2001-743196	B1	20010108

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 29 OF 137 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 23
TI Process for manufacturing D-tagatose
SO U.S., 15 pp., Cont.-in-part of U.S. Ser. No. 821,969, abandoned.
CODEN: USXXAM
AB D-Tagatose is manufactured from cheese whey and/or milk. The cheese whey and/or milk is hydrolyzed to prepare a mixture comprising galactose and glucose. Galactose is separated from the glucose by fermentation and subjected to isomerization using L-arabinose isomerase, thereby producing D-tagatose. The D-tagatose can be used as a reduced calorie food sweetening and bulking agent, as an intermediate for the synthesis of optically active compds., and as an additive in detergent, cosmetic and pharmaceutical formulations.

ACCESSION NUMBER: 2000:285626 CAPLUS
DOCUMENT NUMBER: 132:307346
TITLE: Process for manufacturing D-tagatose
INVENTOR(S): Ibrahim, Osama O.; Spradlin, Joseph E.
PATENT ASSIGNEE(S): Kraft Foods, Inc., USA
SOURCE: U.S., 15 pp., Cont.-in-part of U.S. Ser. No. 821,969, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 6057135	A	20000502	US 1992-976241		19921113
CA 2086912	AA	19930717	CA 1993-2086912		19930107
PRIORITY APPLN. INFO.:			US 1992-821969	B2	19920116

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 30 OF 137 USPATFULL on STN
TI Highly regulable promoter for heterologous gene expression
AB The invention relates to an operon encoding enzymes involved in the utilization of L-arabinose, to the promoter derived therefrom, and to expression systems utilizing the promoter. The promoter is particularly useful for expression of DNA sequences in prokaryotes because of their inducibility and repressibility of the promoter. The invention also relates to the enzymes of the operon, and antibodies thereto.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2000:24481 USPATFULL

TITLE: Highly regulable promoter for heterologous gene expression

INVENTOR(S): De Lencastre, Herminia, New York, NY, United States
De Sa-Nogueira, Isabel, Oeiras, Portugal

PATENT ASSIGNEE(S): The Rockefeller University, New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6030807		20000229	
APPLICATION INFO.:	US 1997-926842		19970910	(8)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1996-31077P	19960910	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Railey, II, Johnny F.
LEGAL REPRESENTATIVE: Klauber & Jackson
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 29 Drawing Figure(s); 28 Drawing Page(s)
LINE COUNT: 3892

CAS INDEXING IS AVAILABLE FOR THIS PATENT.